FACTS AGAINST VACCINATION

A REPLY

TO THE

Pamphlet, entitled: "Facts about Smallpox and Vaccination," issued by the British Medical Association.

Issued by
THE NATIONAL ANTI-VACCINATION LEAGUE,
Garrick House, 27, Southampton Street, London, W.C.

1910.

Bristol:
ROSE AND HARRIS, PRINTERS, BROADMEAD.

PRICE THREEPENCE.

"When Doctors differ it seems difficult to resist the claim of parents to be allowed to choose for themselves which opinion they will follow."

Dr. (now Sir) WILLIAM J. COLLINS and Mr. J. ALLANSON PICTON

(In their Dissent from the Report of the Royal Commission on Vaccination. Par. 283).

"There are two sides to the question, but my opinion is, and always has been, that the facts respecting Vaccination were not sufficiently cleared or matured to warrant compulsory legislation."

WILLIAM EWART GLADSTONE

(In a letter to the Rev. A. W. Hutton, July 30th, 1890).

"Against the body of a healthy MAN, *Parliament has no right of assault whatever under pretence of the Public Health; nor any the more against the body of a healthy* INFANT . . . *To* FORBID *perfect health is a tyrannical wickedness, just as much as to forbid chastity or sobriety. No law-giver* CAN *have the right. The law is an unendurable usurpation, which creates the right of resistance."*

FRANCIS W. NEWMAN

("The Political side of the Vaccination System," p. 8).

"The anti-vaccinists are those who have found some motive for scrutinizing the evidence, generally the very human motive of vaccinal injuries or fatalities in their own families, or in those of their neighbours. Whatever their motive, they have scrutinized the whole case; they have knocked the bottom out of a grotesque superstition."

Dr. CHARLES CREIGHTON

("Jenner and Vaccination," p. 352. London, 1889).

"The successive Vaccination Acts were passed by means of allegations which were wholly untrue, and promises which have all been unfulfilled. They stand alone in modern legislation as a gross interference with personal liberty and the sanctity of the home; while as an attempt to cheat outraged nature, and to avoid a zymotic disease without getting rid of the foul conditions that produce or propagate it, the practice of Vaccination is utterly opposed to the whole teaching of sanitary science, and is one of those terrible blunders which in their far-reaching evil consequences, are worse than the greatest of crimes."

ALFRED RUSSEL WALLACE

("The Wonderful Century," p. 314. London, 1898).

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INTRODUCTION.

In January, 1898, the Council of the British Medical Association (London) published a pamphlet, entitled "Facts about Smallpox and Vaccination," and in 1905 a revised edition (price 3d.) was issued, an advertisement of which regularly appears in "*The British Medical Journal.*" Coming from such a source the pamphlet may be taken to represent the best short defence of vaccination that it is possible for its advocates to advance.

In the following pages a point-by-point reply is given to each of the Association's "Facts." A noteworthy feature of this reply is that all the figures used have been taken from official publications, compiled by pro-vaccinist medical men, and the medical quotations, with one or two exceptions, have been taken from works by pro-vaccinist doctors.

The reader is invited to study both sides of the question, remembering that "he who knows only his own side of the case, knows little of that." (*John Stuart Mill*).

December, 1910.

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Facts against Vaccination.

A Reply to the Pamphlet, entitled: "Facts about Smallpox and Vaccination," issued by The British Medical Association.

SMALLPOX MORTALITY.

B.M.A. FACT No. 1. "The mortality from smallpox is much less now than in pre-vaccination days."

THIS fact is as thankfully admitted as its connection with vaccination is strenuously denied.

Smallpox was undoubtedly spread in pre-vaccination times by the practice of inoculation, and it naturally declined considerably when that practice was abandoned. Moreover, smallpox is not the only disease which has declined in recent times, nor is it the one which has declined most. Plague has vanished without vaccination, so has cholera, and typhus has become rare. It is unreasonable to suggest that the causes which have been adequate to produce the diminution of these diseases, have not also been adequate to reduce smallpox.

As regards the influence of inoculation, the Association say that "the Royal Commission on Vaccination concluded that it is very doubtful whether smallpox inoculation in the eighteenth century did more to diminish smallpox mortality by protecting the inoculated, or to increase mortality by spreading the disease amongst the susceptible."

No conclusion of the Majority Commissioners more clearly indicates the one-eyed fashion with which they dealt with the whole subject. There is no fact more certain in the history of the vaccination controversy than that inoculation was a remedy worse than the disease.

A Constant Source of Contagion.

Jenner, and his early supporters, denounced the practice in unmeasured terms (see Baron's "Life of Jenner") though no doubt their interest in the rival prescription of vaccination induced them to exaggerate the facts.

The evidence of earlier and less biassed authorities is, however, unquestionably opposed to the conclusion of the Majority Commissioners. Here are some specimens—

(*a*) Dr. Heberden (1801) in a book described by Simon* as "one of simple medical research, written with no controversial object," says: "However beneficial inoculation proves to individuals, or indeed to the nation at large, the bills of mortality incontestably show that in London more persons have died of smallpox since the introduction of that practice."

(*b*) In 1754 the Royal College of Physicians blessed inoculation as "highly salutary to the human race." In 1807 they confessed ("in answer to His Majesty's gracious inquiry respecting the state of vaccine inoculation and the causes which have retarded its general adoption"), that "however beneficial the inoculation of smallpox may have been to individuals, it appears to have kept up a constant source of contagion which has been the means of increasing the number of deaths by what is called the natural disease."

After Jenner's followers had secured the prohibition of inoculation in 1840, and the temptation to exaggerate the facts had been removed, the plain truth was again frankly admitted by leading pro-vaccinists. Dr. Seaton in his "Handbook of Vaccination" (1868) said: "It was found that it (inoculation) multiplied the foci of contagion . . . Besides, as smallpox could thus be set agoing anywhere, by merely sending a bit of cotton thread dipped in variolous lymph for the purpose of inoculation, it was constantly being introduced into places from which otherwise it might have been absent. Hence the general mortality from smallpox, after the practice of inoculation had become diffused, was considerably greater than it had been before that practice was known."

* "Papers relating to the History and Practice of Vaccination," 1857, p. ix.

"In Italy, since 1888, vaccination of infants has been compulsory, as has re-vaccination of children attending *public* schools. Already a great improvement is indicated. In 1881-90 the smallpox death-rate was 355 per million per annum, and in 1891-1894 it was only 65."

It is significant that in the 1905 edition of the Association's "Facts" this statement is suppressed. The reason is revealed by the following table which gives the deaths from smallpox in re-vaccinated Italy and in unre-vaccinated England and Wales, during the 22 years 1887-1908.

Year	Italy		England and Wales	
	Total Deaths	No. per Million of Population	Total Deaths	No. per Million of Population
1887	16,249	548	506	19
1888	18,110	607	1,026	37
1889	13,416	447	23	1
1890	7,017	232	16	0
1891	2,910	95	49	2
1892	1,453	47	431	15
1893	2,638	85	1,457	49
1894	2,606	84	820	27
1895	2,998	96	223	7
1896	2,033	64	541	17
1897	1,003	31	25	1
1898	420	13	253	8
1899	214	7	174	5
1900	316	9	85	3
1901	3,396	104	356	10
1902	2,413	74	2,464	75
1903	6,049	183	760	23
1904	3,093	93	507	15
1905	482	14	116	4
1906	169	5	21	1
1907	451	13	10	0
1908	561	17	12	0
Average number per annum during the whole period	4,000	130	449	14.5

It will be observed from the last line of figures on the above Table that, on the average, re-vaccinated Italy has had nine times as many deaths from smallpox, per million of the population, as unre-vaccinated England! It will also be noticed that "the great improvement" referred to in the 1898 edition of the B.M.A. facts was followed by a serious recrudescence of the disease in the years 1901-4, the average number of deaths in these years being 113 per million, as compared with 31 per million in unre-vaccinated England!

Thus the example of Italy is alone sufficient to disprove the Association's "Fact" No. 3.

As will be shown later (see p. 17) the real cause of any country's freedom from smallpox is not much vaccination and re-vaccination, but much attention to isolation and to personal and municipal hygiene.

Attention may, however, be drawn here to the following figures which show that Italy, as compared with England, is much more subject to epidemic diseases generally, and though the figures display an improving condition of things, they also show that much remains to be done in the direction of sanitary reform before the none too high standard even of England is reached :—

AVERAGE ANNUAL MORTALITY FROM PRINCIPAL EPIDEMIC DISEASES, AND FROM ALL CAUSES, IN ITALY AND IN ENGLAND AND WALES.

Period.	Italy		England and Wales	
	Principal Epidemic Diseases: per Million.	General Death Rate per 1,000.	Principal Epidemic Diseases: per Million	General Death Rate per 1,000.
1886-90			2,345 (13.6)	18.9
1887-90	6,590 (458.5)	26.8		
1891-95	5,412 (81.4)	25.5	2,167 (20.0)	18.7
1896-1900	4,680 (24.8)	22.9	2,226 (6.6)	17.6
1901-05	4,314 (93.6)	21.9	1,792 (25.4)	16.0
1906-08 (3 yrs.)	3,960 (11.6)	20.6	1,464 (0.4)	15.0

These figures are based on tables which appear on pages 113 and 143 of the 71st (1908) Annual Report of the Registrar-General of Births, Deaths and Marriages in England and Wales. The principal epidemic diseases referred to in the table are :—smallpox, measles, scarlet fever, diphtheria and croup, whooping cough, enteric fever, diarrhœa and dysentery. The figures in brackets represent the mortality per million from smallpox alone, as included in the larger figure.

The Example of England.

Further evidence of the fact that vaccination has no prophylactic effect upon smallpox is afforded by the experience of England during the period immediately preceding the great pandemic of 1871-2, as compared with the period subsequent to that date. In the former period the population of this country was never better vaccinated, whereas during recent years thousands of children annually have escaped the operation. Diagram C (*see Appendix*) shows that instead of the incidence of the disease being greatest in the latter period, it was least. The years of much vaccination were years of much smallpox, and the years of declining vaccination have been years of declining smallpox.

MUCH VACCINATION AND LITTLE SMALLPOX.

B.M.A. FACT No. 4. "In classes among which there is much vaccination and re-vaccination there is little smallpox."

In support of this "fact" reference is first made to the comparative freedom from smallpox enjoyed by postal officials and policemen. Is it really necessary to point out that these men, being specially selected as physically fit, and following healthy occupations, are extremely unlikely to contract smallpox in any case?

Clear proof that vaccination can play no part in their relative freedom from the disease is, however, afforded by the fact that it has utterly failed to protect the much better vaccinated men in the Army and Navy.

It is significant that the Association dismiss the Army and Navy experience in a few scant words, as follows:—

> "In the Army and Navy a large majority* of the men are successfully re-vaccinated, and there is very little smallpox—very much less than before re-vaccination became so prevalent."

We shall devote more space to the Army and Navy experience, with a view to showing that it provides a complete demonstration of the uselessness of vaccination.

The Army "wholly protected" since 1858.

In his "Handbook of Vaccination" (1868) Dr. Seaton says:—

> "The troops serving in the United Kingdom may be looked on as virtually a wholly 'protected' force, for since 1858 every recruit, whether or not he have marks of smallpox or of previous vaccination, is required to be vaccinated on entering the service, and the soldiers who had previously enlisted, who were without proper marks of vaccination, have also been ordered to be re-vaccinated" (p. 242).

Evidence of the extent to which vaccination was enforced amongst the troops in the sixties is afforded by Dr. Seaton's admission that "the cases of smallpox amongst the British Troops in China in 6 years 1859-64 were 135; all the individuals attacked had marks of vaccination except two, and these had marks of former smallpox. One of these two died" (p. 231).

Dr. Seaton also quotes the following figures:—

SMALLPOX AMONGST BRITISH TROOPS 1859 TO 1864.

		Cases	Deaths	per cent. of fatal cases
United Kingdom,	1859-64	658	38	5.8
India	1860-64	614	90	14.6
China	1859-64	133	20	15.0

Dr. Seaton attributes the heavy fatality rate amongst the troops in India and China to the change of climate.

Smallpox in the "Wholly Protected" British Army.

The following Tables (summarised from the official Annual Reports of the Army Medical Department) afford overwhelming proof of the utter uselessness of vaccination as a preventive or mitigant of smallpox.

SMALLPOX IN THE BRITISH ARMY (HOME AND ABROAD) 49 YEARS 1860-1908.

Period	Average Annual Strength	Average Annual No. of		Average Annual Ratio per 10,000		Mortality per cent. of Cases
		Cases	Deaths	Cases	Deaths	
1860-69	185,332	220.6	20.8	12.0	1.1	9.4
1870-79	170,108	100.6	11.9	6.0	.7	11.8
1880-89	180,158	94.1	8.7	5.2	.5	9.2
1890-99	200,270	36.3	3.4	1.8	.17	9.4
1900-08 (9 years)	229,728	58.4	4.1	2.5	.18	7.0
Annual Average 49 years 1860-1908	192,372	102.9	9.9	5.3	.5	9.6

* It is not easy to understand what is meant by the words "a large majority." Brigade-Surgeon Nash told the Royal Commission (Q 3559) that in the Army vaccination and re-vaccination was as perfect as endeavours could make it.

SMALLPOX IN THE BRITISH ARMY (UNITED KINGDOM).

Period	Average Annual Strength	Average Annual No. of		Average Annual Ratio per 10,000		Mortality per cent. of Cases
		Cases	Deaths	Cases	Deaths	
1860-69	78,276	72.4	4.0	9.3	.5	5.5
1870-79	88,586	46.8	4.4	5.3	.5	9.4
1880-89	90,360	10.9	.8	1.2	.1	7.3
1890-99	97,982	3.1	—	.3	—	—
1900-08 (9 years)	111,212	2.5	.44	.2	.04	17.4
1860-1908	92,917	27.6	2.0	3.0	.2	7.1

SMALLPOX IN THE BRITISH ARMY (INDIA).

Period	Average Annual Strength	Average Annual No. of		Average Annual Ratio per 10,000		Mortality per cent. of Cases
		Cases	Deaths	Cases	Deaths	
1860-69	60,514	101.7	13.5	17.0	2.2	13.3
1870-79	57,165	39.6	5.6	7.0	1.0	14.2
1880-89	59,771	58.0	5.3	9.6	.9	9.1
1890-99	67,897	29.5	3.2	4.3	.5	10.8
1900-08 (9 years)	66,777	51.6	3.4	8.0	.5	6.6
1860-1908	62,336	56.2	6.3	9.0	1.0	11.1

It is true that these Tables show a diminution of smallpox (especially in the case of the troops in the United Kingdom), but it is equally plain that that diminution cannot be attributed to vaccination because the troops were as well "protected" by vaccination in the earliest period shown on the Tables as they were in the latest.

It will also be noticed that the decline in smallpox amongst the troops in India has been very much less than that amongst the troops at home, indicating that the greater immunity of the latter is due, not to their vaccinal "protection," but to their healthier environment, and to their fewer opportunities of contact with the disease.

The real explanation of the diminution of smallpox shewn in the Tables is afforded by the following table, which shows that it has simply run parallel with a remarkable reduction in the death-rate from all causes:—

BRITISH ARMY.
AVERAGE ANNUAL DEATH-RATE PER 1,000 FROM ALL CAUSES.

Period	Total Army	United Kingdom	Abroad
1864-69 (6 years)	16.0	11.6	19.1
1870-79	13.0	9.4	16.6
1880-89	11.8	7.1	16.3
1890-99	9.2*	4.7	13.4*
1900-08 (9 years)	9.6*	4.4	12.7*

* Includes deaths during Boer War. The average death-rates for the 6 years (1903-8) subsequent to the Boer War were 5.6 (Total Army), 3.3 (United Kingdom), and 7.7 (Abroad).

Smallpox and Vaccination in the Navy.

Jenner's "Inquiry" was published in 1798, and as early as the 9th December, 1800, Dr. Trotter, Physician to the Fleet, who had urged the adoption of vaccination in the Navy, wrote :—"The Jennerian inoculation will be deservedly recorded as one of the greatest blessings to the Navy of Great Britain that ever was extended to it." Smallpox was then one of the pests of the service. Dr. Trotter, writing 20th February, 1801, said :—"Within the past seven years there have been more than a hundred instances in which the seamen have been infected; twenty having occurred in the last six months in the Channel Fleet alone."

Incited by the enthusiasm of Dr. Trotter, the Medical Officers of the Fleet subscribed for a gold medal, which was presented to Jenner in February, 1801. Instructions were issued to the Surgeons in the Royal Navy in 1814, and again in stronger phraseology in 1825, that they were "to advise all their patients to be vaccinated." That the "advice" was largely followed is clear from the statement of Sir Gilbert Blane, an enthusiastic promoter of vaccination, that "when there was no vaccination in our Navy, one-fifth of all the men enlisted died of smallpox . . . Vaccination was recommended in the Navy before it was taken up by the civil population." ("On the Value and Present State of Vaccination," 1819.)

In 1860 further instructions were issued

directing the Medical Officers of Ships in commission to "advise" all persons on board not previously vaccinated, to submit to the operation immediately, and in 1864 the Admiralty ordered that no person was to be allowed to join the Navy "who has not been, or is not willing to be, vaccinated." In March, 1871, a further order was issued compelling the re-vaccination of all men and boys then in the service. This order was repeated in 1881, and further orders were also issued in 1887.

The "Blessings" of Vaccination in the Navy.

The following Table demonstrates the futility of these various attempts to sweep back the tide of smallpox :—

SMALLPOX IN THE BRITISH NAVY.

Period	Average Annual Strength	Average Annual No. of		Average Annual Ratio per 10,000		Mortality per cent. of Cases
		Cases	Deaths	Cases	Deaths	
1860-69	54,420	214.7	15.9	39.4	3.0	7.4
1870-79	45,642	42.1	4.7	9.2	1.0	11.1
1880-89	46,169	10.0	1.1	2.2	.2	11.0
1890-99	68,544	17.5	1.2	2.5	.17	7.0
1900-08 (9 years)	104,964	7.3	.5	·7	.05	7.5
1860-1908	63,111	59.3	4.8	9.4	.8	8.0

As in the case of the Army there is ample ground for believing that the decline of smallpox in the Navy has been produced by the same improvements in the sanitary care of the men which have effected the following striking decline in the general mortality :—

ROYAL NAVY.
AVERAGE ANNUAL MORTALITY PER 1,000.

Period	From All Causes	From Disease	From Violence
1860-69	12.2	8.7	3.5
1870-79	10.2	6.0	4.1
1880-89	8.1	4.9	3.2
1890-99	6.4	4.1	2.3
1900-08 (9 years)	4.6	3.0	1.5

Half-a-century's Smallpox in the Army and Navy.

The following table summarises the total number of cases of, and deaths from, smallpox which have occurred amongst the best vaccinated and re-vaccinated body of persons in the British Empire during the past 49 years :—

	Cases	Deaths	Mortality per cent.
BRITISH ARMY			
United Kingdom	1,355	96	7.1
India	2,753	307	11.1
Colonies	934	82	8.8
ROYAL NAVY	2,909	234	8.0
Grand Total	7,951	719	9.0

That is to say, there have been, on an average, 162 cases of, and 14.6 deaths from, smallpox every year during the 49 years, 1860-1908, amongst men who were as well vaccinated and re-vaccinated as it was possible for unlimited authority, and frequent medical inspection, to make them.

A Striking Comparison.

Further disproof of the "fact" that "in classes among which there is much vaccination and re-vaccination there is little smallpox," is provided by the following Table :—

A COMPARISON OF THE CASES OF AND DEATHS FROM SMALLPOX IN JAPAN, IN THE BRITISH ARMY IN INDIA, AND IN LIVERPOOL AND LEICESTER.

	Period	Total No. Smallpox		Annual Average No. per 10,000 persons		Mortality per cent. of Cases
		Cases	Deaths	Cases	Deaths	
Japan	1886-1908	288,779	77,415	2.90	.77	26.8
British Army (India)	1880-1908	1,340	116	7.13	.62	8.6
Liverpool	1880-1908	5,204	504	2.92	.28	9.7
Leicester	1880-1908	1,203	61	2.30	.12	5.07

The tremendous significance of this table will be apparent when it is remembered that Japan is the best vaccinated, re-vaccinated and re-re-vaccinated country in the world; that the British Army in India is the best vaccinated and re-vaccinated body of men in the British Empire; and that Liverpool and Leicester are probably the best and the worst vaccinated large towns, respectively, in the United Kingdom.

The alleged immunity of Nurses.

The Association seek further support of their "Fact No. 4" in the alleged immunity of Nurses.

The particulars already given in regard to the failure of vaccination to protect the Army and Navy, prove conclusively that the nurses' immunity, so far as it does really exist, must be a feature of their calling and not an effect of their vaccination.

There is ample ground for believing, however, that their immunity is by no means as great as is commonly supposed. It seems to be so only because the cases to the contrary are not always reported in the press, or because no one has taken the trouble to compile a complete list of the cases that have been so reported.

In support of these views attention may be drawn to the pamphlet entitled "The Legend of the Hospital Nurses" (price 2d.; one shilling per dozen for distribution), a revised edition of which has been recently issued by the National Anti-Vaccination League. This pamphlet contains particulars of numerous cases of, and deaths from, smallpox amongst doctors and nurses, sufficient, in fact, to prove to a demonstration that the pro-vaccinist belief in the efficacy of cowpox blood-poisoning, as a protective agent against smallpox, is a delusion and a snare.

ATTACKS AND FATALITY AMONG VACCINATED AND UNVACCINATED.

B.M.A. FACT No. 5. "In places where smallpox prevails it attacks a much greater proportion of the unvaccinated than of the vaccinated or re-vaccinated, especially where the vaccinations and re-vaccinations are comparatively recent."

B.M.A. FACT No. 6. "In houses invaded by smallpox in the course of an outbreak not nearly so many of the vaccinated inmates are attacked as of the unvaccinated in proportion to their numbers."

B.M.A. FACT No. 7. "The fatality rate among persons attacked by smallpox is much greater, age for age, among the unvaccinated than among the vaccinated."

THESE "facts" are reduced to fallacies by the following simple considerations:—

(1) The classification of the cases into "vaccinated" and "unvaccinated" is entirely misleading, because no standard of vaccination exists. As long as vaccinated people do not take smallpox they are assumed to be efficiently vaccinated. As soon as they take it, it is then asserted that they could not have been "properly done." That is why no "properly done" person ever does, or even can, take smallpox. It is a case of "Heads I win: tails you lose."

(2) As only healthy children are allowed to be vaccinated, and as "slum" children frequently escape vaccination owing to the nomadic habits of their parents, it follows that the "unvaccinated" class (especially in well-vaccinated districts) must be largely made up of that part of the community most likely to take smallpox, apart altogether from any question of vaccination or non-vaccination.

(3) If the B.M.A. Facts 5, 6, and 7 were really true, we should expect to find well-vaccinated communities, as a whole, showing a much greater freedom from smallpox than badly-vaccinated communities. The following comparisons demonstrate, however, that no such result ensues, and prove that the partial comparisons made by the B.M.A. are entirely fallacious:—

LEICESTER AND BRADFORD.

A Comparison of the Smallpox and Vaccination Statistics, compiled from information obtained from the Bradford Health Department and from the Leicester Health Reports.

1873 to 1903	Leicester	Bradford
Total Smallpox Deaths	67	258
Total Smallpox Death-rate for the 31 years (gross) per million ..	429	1,218
Average Annual Smallpox Death-rate ,, ..	13.8	39.3
Average Population	156,029	211,686

1877 to 1903		
Total Smallpox Cases (no complete records before 1877)	896	1,766
,, ,, Deaths	64	173
Percentage of Deaths to Cases (Fatality-rate) ..	7.1	9.8

1901.	Percentage of Vaccinations to Births ..	5.8	70.0
1903.	Vaccinated Smallpox Cases	194	285
,,	Unvaccinated ,, ,, ...	198	78
,,	Doubtful ,, ,, ...	2	37
1902.	Population	216,389	281,770
,,	Death-rate from all causes	15.9	17.49
,,	Place occupied in list of 29 towns, selected for comparison by the Bradford Medical Officer	Third	Eighth

LEICESTER AND BIRMINGHAM.

1871-72	Leicester	Birmingham
Smallpox Cases per 10,000 of population	327	213
,, Deaths ,, ,, ...	35	35

At this time both Leicester and Birmingham were well vaccinated.

1891-94	Leicester	Birmingham
Smallpox Cases per 10,000 of population	19	63
,, Deaths ,, ,, ...	1.1	5

In 1894 Leicester had only 7 vaccinations per 10,000 population, while Birmingham had 240, or more than 30 times as many.

LEICESTER AND WARRINGTON.

Epidemic of 1892-3	Leicester	Warrington
Smallpox Cases per 10,000 of population	19.3	123.3
,, Deaths ,, ,, ...	1.4	11.4
Percentage of population vaccinated..	60.0 (?)	99.2

(*Vide* Vaccination a Delusion, *by Prof. Alfred R. Wallace, pp.* 53-59).

LONDON, LIVERPOOL AND LEICESTER.

	Epidemic	Cases	Deaths	Fatality Rate	Per cent. of Cases vaccinated
London	1901-2	9,659 [6,945]	1,629 [705]	16.8	72.0
Liverpool	1902-3	2,060 [1,634]	151 [50]	7.33	80.0
Leicester	1903-4	715 [321]	25 [5]	3.49	45.0

[The figures in brackets represent the numbers of cases and deaths which were entered as vaccinated. The remainder are said to have been unvaccinated or "doubtful.'

Smallpox less fatal in towns where vaccination had been neglected.

In defence of Fact No. 7 a comparison is made by the B.M.A. between the fatality rates of vaccinated and unvaccinated cases, respectively, treated in Homerton (London) Hospital in 1873-84, and of the vaccinated and unvaccinated cases treated in the Smallpox Hospitals in Dewsbury (1891-2); Leicester (1892-3); and Gloucester (1895-6), "where vaccination had been neglected." After quoting figures which show a much greater fatality rate in the case of the "unvaccinated," as compared with the "vaccinated," the Association say "it is to be noted that as vaccination was practically optional in these towns [Dewsbury, Leicester and Gloucester] the unvaccinated children according to anti-vaccination theories should have been more able to resist death by smallpox than those who had been subjected to an operation which is alleged to weaken the system and render it more liable to disease and death."

Oddly enough, a proper comparison of the figures (*i.e.*, a comparison of town with town) shows that this is exactly what took place, at any rate so far as the deaths at all ages are concerned. Here is the comparison in question :—

	Cases	Deaths	Fatality Rate	Per cent. of vaccinated cases
WELL-VACCINATED—				
London	10,403 [8,234]	1,807 [869]	**17.3**	79.0
BADLY-VACCINATED—				
Dewsbury, Leicester, Gloucester	3,323 [2,031]	563 [138]	**16.9**	61.0*

[The figures in brackets represent the admittedly vaccinated].

Had not the fatality rate in the Gloucester epidemic been exceptionally heavy (nearly 22 per cent.) owing to the shameful inadequacy and inefficiency of the hospital arrangements, the figures for the badly-vaccinated towns would have given much more favourable results.

It is not, of course, claimed that when badly-vaccinated towns suffer lightly from smallpox, their relative immunity is merely due to the fact that they are badly-vaccinated; nor is it admitted that, when they suffer heavily, the absence of vaccination is in any degree responsible. What is claimed, from the comparisons, is that they show that, so far from vaccination being the solely determining factor in the prevention and mitigation of smallpox, it is an absolutely negligible quantity, except to the extent to which it stands in the way of the adoption of genuine remedies for the avoidance of the disease. The reasonableness of these contentions will be further illustrated in the reply to the Association's anti-sanitary Fact No. 9.

PROTECTION VARIES WITH THE EFFICIENCY OF VACCINATION.

B.M.A. FACT No. 8. **"The degree of protection conferred by vaccination corresponds to the thoroughness with which the operation has been performed, three or four marks being much better than one or two, and a large mark much better than a small one."**

It is difficult to understand how a statement of this kind can be seriously advanced to-day, in view of the frank confessions which modern vaccine experts have been compelled to make as to the fallaciousness of the "marks" theory.

One mark as good as five or six.

Dr. Birdwood (who was at one time Medical Superintendent of the London Smallpox Hospital Ships, where he had an experience of 12,000 cases of smallpox), when giving evidence before the Royal Commission, said :—"I advocate the production of one vesicle only . . . to vaccinate any baby in five or six places is, in my opinion, unjustifiable, and ought not to be allowed. To vaccinate in more than one place is not necessary, it is producing too severe an attack of the disease. A slight attack of scarlet fever, or any other of the protecting infectious diseases, is as protective as a severe attack. It is so with vaccination."

Large scars no evidence of efficiency.

The assumption that small scars are an evidence of "imperfect" vaccination is,

* It will be observed that although "vaccination was practically optional in these towns," no less than 61 per cent. of the cases were vaccinated! Did the disease pick out the vaccinated for attack?

moreover, a flat contradiction of the orthodox medical theory of vaccination, which is —that the operation is equivalent to a mild attack of smallpox, and that the degree of non-susceptibility to it is an index of the degree of natural immunity. When vaccination does not "take," after repeated attempts, it is regarded as an evidence that the patient is immune; and, conversely, when it takes very well, and produces a "bad arm," the consolation usually offered to the victims is that they are being saved from the possibility of a correspondingly virulent attack of smallpox. Obviously, therefore, faint marks are rather to be regarded as an evidence of "perfect" than of "imperfect" vaccination. This has been frankly admitted by at least one medical man, Dr. J. Kingsford Barton, who wrote in the *British Medical Journal*, of November 30th, 1901, as follows:—"I am inclined to think that very large scars only indicate a greater tendency to take vaccinia (and, therefore, presumably smallpox) more readily, rather than they mean extra efficiency of vaccination."

Modern methods of vaccination produce small scars.

This view is also confirmed by the utterances of the most authoritative exponent of vaccination in this country,—Dr. S. Monckton Copeman, one of the Medical Inspectors of the Local Government Board, and author of the article on "Vaccination" in the 10th edition of the *Encyclopædia Britannica*. In a paper on "Modern Methods of Vaccination," published in the *Lancet* on the 21st December, 1901, Dr. Copeman says:—"When every care has been taken to protect the arm during the progress of the vaccination, and to prevent the premature detachment of the crusts, the amount of permanent scarring of the skin which remains may be astonishingly slight. This is, I think, one of the results of modern methods of vaccination to which, as yet, attention has hardly been sufficiently directed, although in the future it is likely to prove a matter of considerable importance. There can be little doubt, but, that the huge and deep scars, which not infrequently resulted from the vaccinations of former years, were due, to some extent, to excessive destruction of skin-tissue by micro-organisms other than that specific to vaccinia. If this be so, then it becomes apparent that persistence of such large and deep scars, practically throughout life, does not necessarily afford evidence that any equivalent degree of immunity against the infection of smallpox is enjoyed by their possessor. To this fact attention has been called in a recent communication to *The British Medical Journal*, although the writer propounds a somewhat different interpretation of the facts which he has observed." The last remark appears to refer to Dr. J. Kingsford Barton's opinion, above quoted.

The investigations made by the *Lancet*, of the quality of the various vaccine lymphs used in this country, also confirm Dr. Copeman's conclusions by showing that the "purer" the lymph the less pronounced is the inflammation and consequent scarring.

"The old Cicatrix Theory."

Dr. Edward J. Edwardes (first Secretary of the Imperial Vaccination League), may also be quoted against the "marks" theory. In his "Concise History of Smallpox and Vaccination in Europe" (1902), he ridicules the demand for plenty of marks, as follows:—

> Some said, "The more the better," and vaccinated in a dozen places on each arm. They forgot that the early vaccinists had conferred absolute protection by a few slight scratches or incisions, and tested their cases soon afterwards.
>
> The German Vaccination Commission in 1884 concluded that "at least *two* well-developed vesicles are required to confer protection against smallpox" (p. 63).
>
> . . . . . .
>
> If vaccination is repeated at the end of childhood, then three marks appear to be ample. Koch thought two enough. There is a little of the old cicatrix theory about this zeal in counting marks, and measuring "foveate areas" (p. 126).

If, therefore, those pro-vaccinist experts are right who regard insusceptibility to vaccination as an evidence of immunity; if Dr. Birdwood is right in regarding one mark as good as half-a-dozen; if Dr. Kingsford Barton is right in regarding large scars as an indication of a greater tendency to take smallpox; if Dr. Copeman and the *Lancet* are right in regarding a minimum amount of scarring as one of the prime characteristics of modern methods of vaccination, and if Dr. Edwardes is right in sneering at "the old cicatrix theory"; it follows, as the night the day, that the British Medical Association must be wrong in regarding these same features as evidences of "imperfect" vaccination. We leave these "experts" to settle their differences between them.

The L.G.B. and Large Marks.

Notwithstanding Dr. Copeman's frank admissions as to the fallaciousness of the marks theory, the regulations of his official masters, the L.G.B., are still nominally based upon it. As an expert vaccinist Dr. Copeman preaches one doctrine, but, as Medical Inspector of the L.G.B., he preaches another.

In the instructions to public vaccinators it is stated that—

"In all ordinary cases of primary vaccination the Public Vaccinator must aim at producing four separate good-sized vesicles, or groups of vesicles, not less than half-an-inch from one another. The total area of vesiculation resulting from the vaccination should not be less than half-a-square inch."

It will be observed that this instruction merely stipulates a certain area of vesiculation, and not of marks, the assumption being, apparently, that the one is more or less equivalent to the other. There may have been some justification for such an assumption in the days of vaccination with crude lymph, but it is certain that there is no justification for it to-day. As Dr. Copeman himself shows in his lectures on the subject, it is easy under the modern methods of vaccination to produce half-a-square inch of vesiculation without leaving any marks worth the name. Thus, while the L.G.B. regulations seem to be designed to establish a theoretical marks standard, their practical effect is precisely the reverse. It is high time that the attention of Parliament was drawn to their scandalous duplicity.

Dr. Copeman's Definition of "efficiency."

Having exploded the marks theory it may well be asked what does Dr. Copeman propose to put in its place. It is difficult to say. In a lecture which he delivered at Manchester in 1904 he had the temerity to say that the answer to the question as to what constitutes "efficient" vaccination might be summarised as follows :—

"The clinical activity and bacteriological purity of the lymph employed for vaccination ; a skilful performance of the operation itself ; the making of an adequate number of insertions of lymph over a sufficient area ; the observance of precautions needful for ensuring strict asepsis, until the vaccination wounds are soundly healed ; all these are matters to be regarded as essential to 'efficient vaccination.' But, as has been well said by a writer in 'The Edinburgh Review,' 'even after efficient vaccination a slow progress away from safety and towards danger is inevitable, and revaccination, at least once after childhood, is necessary if protection is to be maintained.'"

At first sight this description of the characteristics of "efficient vaccination" seems to be very frank and complete. A little study of its terms, however, suffices to show that it is a tissue of evasions, a string of question-begging epithets. The "lymph" (which is not defined) must be what is called "active" and "pure," terms which are again not defined. The operation must be "skilfully" done, whatever that may mean. There must be an "adequate" number of insertions over a "sufficient" area, and "strict" asepsis observed throughout. The explanation is a verbal sieve which holds nothing. It is a roundabout way of saying that "efficient" vaccination *is* "efficient" vaccination.

Wanted, a Definition of Vaccination.

An intelligible definition of vaccination (despite a century of search for it) is still awaited. Hence we have the strange spectacle of a scientifically trained body of men publishing a pamphlet in defence of something called "vaccination," without making the slightest attempt to enlighten the world as to what that something really is.

The following unguarded confessions, by sundry vaccine experts, of their "profound ignorance" of even the elementary aspects of the problem no doubt account for the Association's scientific modesty :—

"This organism [*i.e.*, the organism of cowpox and smallpox] has been carefully sought, but sought in vain, in spite of all improvements in micro-biological methods . . . Up to the present, then, we have no knowledge of either the micro-organism of smallpox or of that of vaccinia. We still employ, as formerly, the virus taken from the vaccine pustule. Even the relations which exist between the two viruses, and the two diseases which they set up, have not yet been settled. Several authors believe that the bovine disease is only a modified and attenuated form of human smallpox ; whilst others maintain that we have two very different exanthemata, one of which—cowpox—is capable of setting up immunity, not only against itself, but also against smallpox."

("Immunity in Infective Diseases." Elie Metchnikoff.)

"The etiology of smallpox is still, in the practically unanimous opinion of the entire medical profession, an unsolved problem" (p. 55). "When the bacteriologist comes to deal with variola he is very heavily handicapped by his ignorance of the specific organism" (p. 62).

("British Medical Journal." Special Vaccination Number, 5th July, 1902.)

"The contagium of smallpox has not up to the present been isolated."

(Article on "Smallpox." Quain's Dictionary of Medicine. 1902 Ed. p. 1501.)

"The cause of smallpox is universally allowed to be a specific contagion of whose nature we are in the most profound ignorance."

(Article on "Smallpox." Chambers's Encyclopædia. 1904 Ed.)

"The microbe of variola is still unknown, but the prophylactics employed are the general methods taught by the school of Pasteur."

("The Campaign against Microbes." Dr. Etienne Burnet, of the Pasteur Institute, and Head of the Vaccination Service of the City of Paris. 1909).

"The *causa causans* of smallpox is still unknown to us, as also is the effective agent in the protective lymph . . . The intimate nature of the variolous poison is unknown to us. The researches which have been conducted with a view to discovering the cause of the disease . . . have up to the present led to no certain results."

("History of Smallpox and Vaccination," by Dr. P. Kübler, of the Medical Department of the Royal Prussian War Office, as quoted in "The Jennerian," 15th January, 1910, p. 36).

"The germs of variola, vaccinia, scarlet fever and yellow fever, have not yet been discovered."

(Dr. Stephen Paget in the "Standard." 3rd February, 1910.)

SMALLPOX NOT A MILDER DISEASE INDEPENDENTLY OF VACCINATION.

B.M.A. FIRST EDITION FACT No. 8. "It cannot be truthfully alleged that independently of vaccination smallpox is a milder disease now than in former centuries."

THIS fact appeared in the original (1898) edition of the Association's pamphlet. It has been suppressed in the revised edition without comment. We are left to surmise the reason, and it is not difficult to do so. The experience of Leicester (to quote no other evidence) has demonstrated the falsity of the Association's original contention. In fact the revised edition of the "Facts" frankly admits (pp. 12, 13, 17 and 18) the recent occurrence of "mild" and "very mild" smallpox at Leicester.

There is no question that it can be not only truthfully alleged, but, absolutely proved that, independently of vaccination, smallpox is a milder disease now, in well-sanitated countries, than in former centuries.

It can also be proved, and has already been proved in these pages (see pp. 13-14) that smallpox is a milder disease to-day, in towns where vaccination has been neglected and real preventives well provided, than in towns where vaccination has been rigidly enforced, while real safeguards have been neglected.

SANITATION AND SMALLPOX.

B.M.A. FACT No. 9. "Sanitation cannot account for the facts above set forth."

THIS is a strangely perverse pronouncement. The doctors who make it agree that sanitary improvements have exercised an enormous influence in bringing about the modern diminution of the zymotic class of diseases, and yet they contend that these same improvements have been powerless in the case of one disease of that class, viz.: smallpox. Such are the contradictions to which scientifically trained men are reduced in their endeavours to "save the face" of vaccination.

Perhaps the simplest way of proving that sanitation can easily account for the modern diminution in smallpox will be to quote the typical experience of such towns as Liverpool, Glasgow, and Leicester.

Liverpool.

Until within recent years Liverpool was one of the most densely populated and insanitary cities in the United Kingdom, and it is so, in parts, even to-day. In 1875, Dr. Farr constructed life tables based upon the vital statistics of—(1) All England, (2) Liverpool, and (3) Healthy Districts, in order to ascertain what effect healthy environment had upon zymotic diseases. His figures showed that:—

FOR EVERY MILLION BORN ALIVE THERE WOULD DIE, ACCORDING TO THE LIFE TABLES:—

	In Healthy Districts	In England	In Liverpool
By Smallpox	2,359	6,521	8,141
By Fevers	28,146	38,107	76,563
By Measles	6,912	12,865	26,973
By Whooping Cough	10,234	15,161	34,021
By Scarlatina	21,403	30,021	38,302

The significance of these figures is shown at a glance in Diagram D (*see Appendix*).

Dr. Farr, commenting on these remarkable figures, states his opinion "that healthy sanitary condition as to food, drink, and cleanliness of person, house and city, stands first in importance; after it, but subordinately, come quarantine, vaccination, and other preventives, as means of subduing mortality; for the mere exclusion of one out of many diseases appears to be taken advantage of by those other diseases, just as the extirpation of one weed makes way for other kinds of weeds in a foul garden." (See Supplement to 35th Annual Report of Registrar-General).

Dr. Farr's qualified approval of vaccination ill accords with the fact that, at the time he wrote, Liverpool had been for many years one of the best-vaccinated cities in the United Kingdom.

Further proof of the influence of sanitary measures in the diminution of smallpox and other fevers, is afforded by the following figures which show that, since Dr. Farr made use of Liverpool as an "awful example" of unhealthiness, a remarkable decline has taken place in the grosser forms of zymotic diseases :—

CITY OF LIVERPOOL.

AVERAGE ANNUAL DEATH RATES PER 100,000 FROM :—

Period	Smallpox	Typhus Fever	Scarlet Fever	Phthisis
1856-65	37.6	168.5	135.0	350.7
1866-75	48.1	132.2	159.9	333.9
1876-85	16.8	44.1	78.1	255.3
*1886-95	1.6	6.9	47.9	212.9
1896-05	2.8	3.6	29.1	182.7
1906-09 (4 years)	0.003	1.3	24.7	150.9

Nothing but invincible prejudice can prevent anyone from seeing that whatever influences have been adequate to produce the enormous decline in typhus fever shown in the above table, have been also quite adequate to produce the less striking decline in smallpox. There is, in fact, ground for believing that the decline of smallpox in Liverpool and elsewhere would have been greater had the blood of the people not been polluted by vaccination. This is shown by the following experience of the town of Leicester :—

LEICESTER.

AVERAGE ANNUAL DEATH RATE FROM SMALLPOX PER 100,000 OF THE POPULATION.

1856-65	28.0
1866-75	39.0
1876-85	1.4
1886-95	1.3
1896-05	1.4
1906-09 (4 years)	Nil.

Glasgow.

The experience of Glasgow also shows in a striking fashion the marked influence of sanitary reform in the diminution of zymotic diseases. Dr. (now Sir) W. J. Collins and Mr. Picton in their Royal Commission Dissent Report say : "'During the last half century probably no large town has witnessed so great a change in its sanitary condition as Glasgow. So late as 1842 the condition of its population was reported by Mr. Chadwick to the Poor Law Commissioners to be the worst of any he had seen in any part of Great Britain. Sanitation in the modern sense of the term scarcely existed. Typhus and smallpox epidemics devastated the city." Since then various fever hospitals have been opened, extensive town and river improvement schemes carried out, and municipal lodging houses and a municipal washing and disinfecting establishment erected.

The following table (compiled from a report by Dr. J. B. Russell, a former Medical Officer of Health for Glasgow) shows the remarkable decline in the diseases of typhus and smallpox which followed the sanitary and other improvements in question :—

ANNUAL AVERAGE DEATH-RATE PER 100,000 OF THE POPULATION DURING THE FOUR DECENNIAL PERIODS ENDING 1894.

Diseases	(1) Pre-sanitation years 1855-1864	(2) Sanitation Years 1865-74	(3) Sanitation Years 1875-84	(4) Sanitation Years 1885-94	Per cent. of decrease from (1) to (4)
Typhus ..	142.0	105.8	10.75	2.9	98
Smallpox ..	56.6	20.0	.92	.7	99

* First Municipal Fever Hospital opened 1884.

The total number of smallpox deaths occurring in each decennial period was 2,197, 971, 44 and 45. Commenting on these figures Dr. Russell says—"In the 10 pre-sanitation years there were 2,197 deaths from smallpox; in the 30 sanitation years 1,060."

It would be difficult to find a more convincing piece of evidence in favour of the view that sanitation can account for the facts set forth in the British Medical Association's pamphlet.

Leicester as a Control Experiment.

It is possible that believers in vaccination will refuse to be convinced by the experience of Liverpool and Glasgow because vaccination has long been zealously practised in those towns. It will be advisable, therefore, to refer to the experience of a town where the vaccination laws have been set at defiance by the vast majority of the inhabitants for about 30 years. Leicester was the first city in Europe to take the risk (?) of abandoning vaccination in favour of other measures. When this step was taken it was predicted by pro-vaccinists that the town would sooner or later be decimated by smallpox. But so far from this prediction having been fulfilled the experiment has proved an extraordinary success. In fact, Leicester has coped with the disease in a far more successful fashion than any well-vaccinated town of equal size and character in the world. The extent of this success is strikingly depicted in the following table (prepared by Mr. Councillor—now Alderman—Biggs, J.P., of Leicester, who has for many years been a member of the Leicester Sanitary Committee) :—

	Pre-sanitation and vaccination years 1871-73.	Sanitation and non-vaccination years 1892-94.
Estimated total population	98,251	184,547
Per centage of primary vaccinations to births for 10 years ending with the middle of the year of each period ..	84.3	12.9
Number of smallpox deaths under 10 years during each period	193	14
Smallpox death rate of children under 10 per million living at that age	6,699	301

In view of the almost totally unvaccinated condition of the child-population in the second period shown on the above table, it cannot be reasonably contended that vaccination had anything to do with the large decrease (95 per cent.) of the children's deaths. The only other, and, in fact (as the evidence of Liverpool and Glasgow also shows) the only possible alternatives are sanitation, and, in a less degree, isolation. This is confirmed, if confirmation were necessary, by the following official description of the measures adopted by the Leicester Corporation to cope with smallpox and other zymotic diseases after the great epidemic of 1871-3 :—

> "The old middens and most of the ashpits were abolished, the courts re-paved and sanitary appliances introduced; thousands of surface wells were closed, and the public water supply put on; a new main drainage scheme was carried out, out-fall sewers laid down, a large sewage farm secured, and a constant inspection of houses and removal of nuisances has gone on . . . The result of these various measures, involving as they have done the expenditure of great sums of money, is, that Leicester can claim to be one of the healthiest manufacturing towns in the country. The general death-rate, which in 1872 was 26.95 per thousand per annum, was in 1901, 15.71."

("*Leicester and Smallpox—Thirty Years' Experience,*" *A Paper read by Alderman Thos. Windley, J.P., Chairman of the Leicester Sanitary Committee, at the Annual Meeting of the Royal Institute of Public Health, August,* 1902.)

Since 1901 the general death-rate has continued to steadily decline, as follows :—

1902	14.65
1903	13.91
1904	14.56
1905	13.42
1906	14.39
1907	12.65
1908	12.98
1909	12.90

It will be noticed that the last named figure is less than half that of 1872 (26.95).

Thus, whether the experience of well or ill-vaccinated towns be considered the lesson is the same,—sanitation is the prime, public preventive of smallpox.

"Cleanliness covers the whole field of sanitary labour. It is the beginning and the end. Practised in its entirety it would banish all disease from the world" (Sir B. W. Richardson).

SMALLPOX ISOLATION HOSPITALS.

B.M.A. FACT No. 10. **"Though isolation of smallpox cases in hospitals is a useful auxiliary to vaccination, it is no substitute for it, and smallpox hospitals are most expensive."**

WHILE sanitation is undoubtedly the prime public remedy for smallpox, isolation (in which expression notification is here included) probably ranks next in importance as a means of coping with the spread of the disease. But, although the great value of isolation as a subsidiary agent is now commonly admitted, its general recognition and practice are of comparatively recent origin. It is true that it was advocated even in the eighteenth century—in place of the old practice of sowing smallpox by inoculation—but the enormous attention which was attracted by the introduction and rise of vaccination seems to have eclipsed the idea of isolation, and it did not again come into view until the great pandemic of 1870-2 overwhelmingly proved the falsity of the claims which had been made for vaccination by Jenner and his followers.

The "Leicester Method."

Leicester enjoys the distinction of being the first town, in this country, to recognise the importance of the prompt notification and isolation of smallpox cases, the voluntary quarantining or supervision of contacts, and the disinfection of infected houses, etc. As a result of the adoption of these expedients, and notwithstanding an increasing neglect of vaccination, no fewer than 33 importations of smallpox, and a large number of successive outbreaks of the disease, were successfully stamped out during the sixteen years 1874-1889 alone. (See Mr. Biggs' evidence before the Royal Commission on Vaccination). The "Leicester Method," as it is called, has accordingly been adopted by almost all sanitary authorities, whether they do or do not profess to believe in the efficacy of vaccination.

London and Isolation.

The value of isolation has, however, never been more strikingly shown than by the experience of London. In the year 1885 the Metropolitan Asylums Board decided "to maintain a hospital always ready for smallpox patients, and to remove thither, direct from their homes, all smallpox cases able to bear the journey." The effect of this reform was immediately evident, as shown by the figures in the Registrar-General's Annual Reports. Here is a summary of the figures in 13-year periods :—

LONDON.

ANNUAL AVERAGE SMALLPOX DEATH-RATE PER MILLION.

1847-59	313
1860-72	465
1873-85	234
1886-98	8

There has been a rise in the death-rate during the subsequent 11 years (1899-1909) to an annual average of 31.3 per million. This was due to the relatively heavy mortality of the 1901-2 epidemic.*

It only remains to be pointed out that the vaccinal default in London increased from 7.8 of the births in 1886 to 33 per cent. in 1898, the annual average being 18.4 per cent.

Isolation in Liverpool and Glasgow.

Similar testimony could also be quoted from the experience of every other large town in Great Britain. For example, the following table, compiled from the official reports of the medical officers of health of Liverpool and Glasgow, respectively, is equally as striking :—

Number of deaths from Smallpox during the period of imperfect Isolation.			Number of deaths during the period of strict Isolation.		
Period	Total Number of deaths	Average per annum	Period	Total Number of deaths	Average per annum
LIVERPOOL 37 years 1848-84	5,906	160	25 years 1885-1909	330	13.2
GLASGOW 20 years 1855-74	3,164	158	35 years 1875-1909	501	14.3

* In the course of a discussion on the question of hospital accommodation for smallpox cases, at a meeting of the Metropolitan Asylums Board on the 3rd July, 1909, Mr. W. Dennis, Chairman of the Hospitals Committee, said that owing to the state of unpreparedness in which the late epidemic found that Board, they were called upon to pay over a million of money, and £300,000 of that money was absolutely wasted on account of the want of foresight of the managers of that day. He hoped the managers would profit by the experience of the past and make proper provision for the reception and treatment of any smallpox cases that might arise.

Germany and Isolation.

Germany, too, affords corroborative testimony. Pro-vaccinists are very fond of referring to Germany, as an example of a country where vaccination and re-vaccination have been carried out to the highest pitch in Europe. They conveniently forget to add, however, that the German vaccination laws have also been accompanied by the most stringent isolation decrees in the world, which date, in their present form, from the German Infectious Diseases Act of 1883. Under this law parents and doctors are required to notify cases of fever to the Police, and the latter inform the Medical Officer of Health, whose duty it is to examine the cases at once, and if necessary arrange for their immediate removal to hospital. As a Police Officer is always "on the spot" it follows that little or no delay takes place in the notification; a most vital point in highly infectious diseases. Moreover, as cases of chicken-pox have also to be notified and removed to hospital, there is less likelihood of undiscovered cases of smallpox being left un-isolated, as sometimes occurs in this country, where the notification arrangements are much less effective.*

The Place of Isolation.

Of course, it is not contended that isolation has been more than a subsidiary influence in effecting the enormous reduction of smallpox shown in the above tables. As has been previously pointed out, sanitary improvements, with which measures of isolation are usually associated, have been, and must continue to be, the prime reforming factors.

Attention may also be called to the fact that not a few doctors are beginning to declare that the advantages to be derived from the aggregation of fever cases in isolation hospitals have been exaggerated, and that in some cases mischievous results have been produced. The system is also open to objection from the point of view of the liberty of the subject. Where reasonable facilities for isolation can be provided at home, it is certainly an unwarrantable invasion of family life to tear children from their domestic surroundings in order to place them under the care of professional nurses who, however humane and affectionate their desires may be, cannot possibly take the places in the hearts and minds of their little patients that are filled by mother and home.

It may be hoped that as sanitary and hygienic reforms become more general, the necessity (whether real or supposed) for resorting to the expedient of hospital isolation will become less and less, and ultimately be entirely abolished.

SAFETY OF VACCINATION.

B.M.A. FACT No. 11. "Vaccination is very safe."

VACCINATORS have always affirmed this, even in the days of the arm-to-arm method of performing the operation.† And yet the dangerous character of the latter system is now admitted on all sides. It was proved up to the hilt by the revelations made to the Royal Commission, and contained in a special volume (Appendix IX.) of their Report, one of the blackest indictments of the "healing" profession ever recorded in the history of medicine. The Registrar-General's Returns show that, during the 34 years 1875-1908, inclusive, no fewer than 1,327 deaths were admitted by conscientious doctors, on their own certificates, to be due to cowpox and other effects of vaccination, though there is grave reason to fear that the actual number was much greater, as it is known that deaths due to vaccination have been, shall we say unwittingly, certified as caused by some other disease. Moreover, if so many have been done to death by the operation, what must be the number of those who, escaping death, are more or less seriously injured? Possibly, the modern way of vaccinating with smallpox matter, which has been cultivated through a series of calves and then diluted with a mixture of glycerine and distilled water, is less productive of dangerous results than the older methods, but, if there is any truth at all in the germ theory of the origin of disease, and if what is called Listerism is anything more than a medical fad, it is certain that diseased matter from a smallpox pustule, however much it may be modified or diluted, cannot possibly be inoculated into the human body without incurring serious risk of unintended complications.

* For further information as to German experience in regard to Smallpox and Vaccination see "The Argument from Germany," published by The National Anti-Vaccination League. Price 1d.

† In 1857, Sir John Simon said that against "the vast gain" by (arm-to-arm) vaccination, "there is no loss to count."

Scarcely a month passes without a report of a Coroner's inquiry into the death of a child after vaccination, appearing in the public press of this country. These tragic incidents provide repeated proof that, at the best, vaccination is anything but "very safe," that it is, indeed, attended with very serious risks, and that it is therefore an unwarrantable interference with the natural rights of parents to refuse them the same full choice of accepting or rejecting the operation as is allowed them in the case of every other surgical operation. No one can reasonably claim to be prejudiced by the toleration of such freedom of choice, least of all the believers in vaccination who can, *ex hypothesi*, easily protect themselves against the supposed risks of contact with healthy unvaccinated people.

SYSTEMATIC RE-VACCINATION.

B.M.A. FACT No. 12. "For the prevention of smallpox, systematic national re-vaccination is the outstanding requirement of this country in the present day."

THIS "fact" is made curiously significant by the circumstance that it did not appear in the original edition of the "facts." Are we to understand that systematic national re-vaccination was not considered to be an outstanding requirement in 1898? At any rate that was the view of Jenner and his immediate followers. They strenuously denied the necessity for re-vaccination; some even denied its possibility.* They saw very plainly that to admit the possibility of re-vaccination was to give away the theory of vaccinal protection. If people could be re-vaccinated they could take smallpox and could not be regarded as being protected by their previous vaccination. The logic of the argument was sound enough, but the hard facts of experience refused to fit the logic. The records of the smallpox hospitals showed that the vast majority of the patients taken into the wards had been duly "protected" by vaccination. Another theory of vaccinal protection was therefore necessary to square with the facts, and so the pro-vaccinists promptly swallowed their previous contention and began preaching the advisability of re-vaccination at the age of puberty, as a precautionary measure, and this suggestion has now grown into the modern demand for "systematic national re-vaccination."

How Often?

We presume this demand means that re-vaccination should be performed periodically. The Royal Commission, at any rate, took this view, and made a recommendation accordingly. Mr. Walter Long, also, in the famous speech (January 14th, 1903) in which he said that "primary vaccination of itself was really almost a farce," similarly recognised the logic of the situation. He said "it would be a very great advantage if a well-considered system of re-vaccination at certain ages conld be devised and adopted," because "vaccination in infancy, unless it was repeated at proper intervals, was not a certain safeguard." And the greatest authority of all, Dr. Copeman, says that "it is desirable that the operation should be repeated at the age of from seven to ten years, and thereafter, if it be possible, at intervals during later life" (Enc. Brit., 10th Ed. Supplemental vols. Art. "Vaccination.")

It will be noted that Dr. Copeman fixes the age at which the first revaccination is necessary at from seven to ten years, and yet he must know that there is just as much reason for fixing it at two years. This is shown by the very remarkable evidence contained in the paper which Professor F. Smith, of the Army Veterinary School, communicated to the Sanitary Institute in 1892, entitled "For How Long does Vaccination Confer Immunity Against Smallpox?" As a result of an experience of some 80,000 vaccinations and re-vaccinations, Professor Smith arrived at the following tremendously significant conclusions:—

(1.) That, after a successful primary vaccination, it is possible to successfully re-vaccinate a person 12 months later; and (2) That it is possible for a person to be again successfully re-vaccinated within three years of a thorough re-vaccination.

On the basis of these conclusions, therefore,

* The Vaccine Pock Institution (London) said "It has been found that a person, whose constitution has distinctly undergone the Vaccine Disease, is in future insusceptible of the same disorder" (1801). Dr. Pearson (Jenner's co-worker in the promotion of vaccination) also held the same view, and as late as 1851 the National Vaccine Establishment (instituted in 1808) said "The restriction of the protective power of vaccination to any age, or to any term of years, is an hypothesis contradicted by experience, and wholly unsupported by analogy."

it is clear that all unre-vaccinated children over one and a half years of age, or thereabouts, and all re-vaccinated persons whose re-vaccination is more than three years old, *i.e.*, the vast majority of the population, are practically unvaccinated, and always have been, and that no scheme of re-vaccination can possibly be of any value, even from the pro-vaccinist's point of view, unless it requires the operation to be repeated at least every three years.

"Three successful vaccinations in four months."

Attention may also be drawn to the even more striking admissions that Dr. L. C. T. Dobson made at a meeting of a Medical Society in London on the 10th December, 1901, during a "Discussion on modern methods of vaccination and their scientific basis," which was opened by Dr. S. Monckton Copeman. According to the report of "The British Medical Journal," Dr. Dobson stated that in some cases vaccination could be performed again and again on the same person with different lymphs. He also referred to a case of a child having three successful vaccinations in four months, and added that "what efficient re-vaccination was, was not yet established." "The Lancet" report of the same discussion further states that Dr. Dobson informed the meeting that, having himself been successfully vaccinated with lymph from the Government laboratories, he shortly afterwards inoculated his finger with lymph from another source and a good vesicle resulted.

It is strange that the vaccinists cannot see that these confessions destroy the whole theory of vaccinal protection, and demolish at one fell swoop all the marvellous statistics that have been elaborated in its defence.

CALF LYMPH.

B.M.A. FACT No. 13. "Calf Lymph is now available for the vaccination of every child in the country."

THE attention of the discerning reader will be arrested by the Association's meagre treatment of the question of the "lymph." He will note the absence of any attempt to give answers to the queries that at once crowd into the intelligent mind when the "lymph" question is considered. What is the so-called lymph? Is it really lymph, or is it a diseased and not a natural product? If it is a diseased product, how did it originate, and what is its nature? Is it cowpox or is it smallpox? These are but a few of the queries which should be answered in any work purporting to set forth the facts concerning vaccination.

We do not propose to do more than roughly outline the history of the numerous "lymphs" which have been made to do duty for vaccination purposes. Those who desire to refer to this phase at length will find the staggering facts set out with scientific precision in Professor Crookshank's "History and Pathology of Vaccination." Anyone who takes the trouble to read that book will not be long in arriving at the conclusion that the B.M.A. had very cogent reasons, from the point of view of the reputation of vaccination, for avoiding any attempt to supply the public with "facts" relating to "lymph."

The Original "Lymph."

It is said that Jenner was led to take up the idea of vaccination by hearing the tradition of the dairymaids that those persons who contracted cowpox, after milking cows suffering from that disease, were immune from smallpox. What is cowpox? At the best, it is a disease of "excessive filth and nastiness" (Mr. Lawrence, 1799), "a disorder known only to the Cow Doctor in dirty dairies" (Mr. Birch, 1807). At the worst there is ground for believing that the disease is given to cows by milkers suffering from syphilitic sores. In any event the real affinity of cowpox is not to the smallpox, but to the great pox; the ulcers of cowpox, so common in the early days of vaccination, were practically indistinguishable from the chancres of syphilis. (See Clauses 213/215 of the Royal Commission "Dissent" of Dr. (now Sir) W. J. Collins, and Mr. Picton).

Horse-Grease Cowpox.

This was probably one of the reasons why Jenner (at first) repudiated the notion that the ordinary cowpox of the cow afforded any protection, and asserted that "the only true and life-preserving fluid" was that taken from the teats of cows infected with "horse-grease." This filthy notion aroused so much disgust, however, that Jenner dropped it in favour of the so-called natural or spontaneous cowpox lymph which he had at first condemned.

Later on other sources of "lymph" were tapped. These included "lymph" from cases of human smallpox, cattle plague, sheep pox, goat pox, etc., etc.

Smallpox lymph officially condemned.

John Badcock, a chemist of Brighton, was especially prominent as the producer of a new brand which he obtained by means of

the inoculation of cows with smallpox. This lymph was extensively used in Great Britain, and strains from it were also sent all over the world. Smallpox lymph did not, however, meet with the approval of the Government vaccine experts. For example, in 1879 the Irish Local Government Board refused permission to the Galway Union to allow a fresh strain of lymph to be obtained (*a la* Badcock) by means of the inoculation of a calf with smallpox matter. The Board said : "Smallpox virus taken from a calf would communicate that disease to a human subject, and be thereby a fertile source of propagating the disease, and would, moreover, render the operator liable to prosecution under the 4th section of 31 and 32 Vic. cap. 87."

Calf Lymph officially condemned.

Other vaccine manufacturers strongly urged the general use of calf lymph (*i.e.*, cowpox virus artificially cultivated in large quantities on the abdomen of the calf), but this also was officially condemned. Dr. Seaton (the greatest vaccine expert of his day), said : "Vaccination thus performed is much less successful than vaccination with humanised lymph." ("Handbook of Vaccination," 1868, p. 336).

Even as late as 1893 and 1895 the Local Government Board refused permission to several Boards of Guardians who had applied to be allowed to purchase calf lymph for use at the Public Vaccination Stations.

The L.G.B. turns a Somersault.

The terrible accounts of injuries through arm-to-arm vaccination, given in evidence before the Royal Commission (which sat from 1889 to 1896) made the continued enforcement of that method impossible. The Commission strongly advised its abandonment in favour of calf-lymph vaccination. That recommendation was adopted by Parliament in 1898, and the L.G.B. were compelled to turn a somersault. They now blessed the thing they had formerly banned, and banned the thing they had formerly blessed. Public Vaccinators were forbidden to resort to arm-to-arm vaccination, and were commanded to use only glycerinated calf-lymph or "such other lymph as might be issued by the Local Government Board."

What is the Source of Government Lymph ?

No greater conundrum can be put to any public vaccinator in England than to ask him what is the source of the official lymph that he uses.

Just prior to the abandonment of the arm-to-arm system, Dr. Monckton Copeman stated, in his Milroy Lectures delivered before the Royal College of Physicians (London) in 1898, that the lymph stock in use at that time "at the Government Animal Vaccine Establishment was originally obtained on 26th November, 1881, at a farm in the village of Laforet not far from Bordeaux ; whence a sample of lymph from the 17th calf in succession from the animal first affected was sent by Dr. Dubreuilh, of Bordeaux, to the Medical Officer of the Local Government Board" (p. 71).

"Lymph" from Cologne.

In 1906, Sir William J. Collins, M.P., elicited from the Rt. Hon. John Burns, M.P., as President of the L.G.B. (after much questioning) that when the glycerinated brand of calf-lymph was adopted by the Government experts after the passing of the 1898 Act, "Dr. Blaxall, the newly-appointed Director of the Board's Glycerinated Lymph Establishment, obtained as stock for starting his series of calf-to-calf vaccinations lymph from Cologne." Mr. Burns also stated that other lymphs had been obtained occasionally from continental stations, and that it was possible "that in some instances of this kind the lymph may have been originally derived from artificial inoculation of calves with smallpox, but in no case was lymph used at the establishment unless it had passed through a series of calves."

Variolous Lymph now in general use.

There can be little question that the lymph supplies of this country, and other countries also, are now obtained by the inoculation of calves with smallpox matter. This was virtually admitted in 1907 by Mr. W. H. Power (then Principal Medical Officer to the English Local Government Board) in his evidence before the Royal Commission on Vivisection. The English Government's vaccine experts hesitate, however, to openly admit this, because it would raise an outcry on the part of the public, and be tantamount to an admission that they are breaking the law which prohibits the inoculation of smallpox. They evade the admission by saying that the lymph is not obtained "directly" from human smallpox, which is, of course, but another way of saying that it is so obtained, but indirectly. They also try to delude themselves and the public into the belief that variolous lymph can be made to change its character by cultivating it through a series of calves. One feels almost ashamed to have to point out that the lymph so produced is either smallpox lymph or it is not. If it is smallpox lymph it must be capable of propagating smallpox. If it is not smallpox lymph it must be useless, *ex hypothesi*, as a protection against smallpox. Sooner or later the pro-vaccinists will be compelled to acknowledge one or other of these alternatives. In either case the acknowledgement will hasten the doom of vaccination.

DO THE ASSOCIATION'S "FACTS" JUSTIFY THE LEGAL ENFORCEMENT OF VACCINATION?

It only remains, finally, to take exception to the unexpressed but implied conclusion of the Association's Pamphlet, viz.: *that vaccination and re-vaccination should be enforced and endowed by the State.*

Of course, the foregoing replies to the several "Facts" carry with them an implied refutation of the case for compulsion. If vaccination is an unscientific, useless and dangerous operation, as contended in this Reply, its legal enforcement is obviously a crime.

It will not be out of place, however, to conclude this publication with a brief direct reference in justification of the anti-vaccinist demand for the complete disestablishment and disendowment of vaccination.

In a sentence the Vaccination Acts should be repealed because they make good health a crime, and because they assault the bodies of the Nation's children and violate the consciences of their parents.

Again; the Vaccination Acts should be repealed because they were passed without any mandate from the people at large.

Mr. Balfour has recently stated in the House of Commons that Democracy stands for "Government by consent." If that be the case it is safe to say that the Vaccination Acts violate this democratic principle. There is no instance on record in which compulsory vaccination laws have been passed by a vote of the people. On the other hand, in Switzerland, a proposal to make vaccination compulsory in all the Cantons was rejected by a 79 per cent. majority of the citizens voting, one of the most overwhelming majorities ever recorded in connection with the use of the Referendum in Switzerland. That the British people would be equally as emphatic in voting against compulsory vaccination, had they the opportunity afforded to them, is clear from the example of the thousands of parents who have dared to suffer fine, distraint, imprisonment, loss of employment, and other forms of public and private persecution, rather than submit their children to be medically diseased by fee-paid Government officials. The large number of parents who are availing themselves of the facilities afforded by the improved "Conscience clause" in the English and Scotch Vaccination Acts of 1907, is also a plain indication that the entire repeal of the Vaccination Acts cannot be much longer delayed.

Many pro-vaccinists seem to think that the exemption facilities already granted make a sufficient concession to the "conscientious objector." It will suffice to ask those who argue in this way: "How would you like to be compelled to make a statutory declaration before being allowed to vaccinate your child? If you would regard such a demand as offensive to your intelligence and humiliating to your citizenship, how much more must the conscientious objector entertain the same feelings towards a law which compels him to get permission, not to disease his child, but to keep it healthy?"

Anti-vaccinists readily acknowledge that the new conscience clause in the English and Scotch Acts of 1907 is an improvement on the 1898 Clause, but they do not intend to be satisfied with it, or with any such compromise. They consider that, if compulsion is a right thing, it should be enforced on all classes alike, without even the option of fines, to say nothing of exemption. Fines only punish the poor; and exemption is doubly wrong—it insults the law by allowing its authority to be openly evaded, and it insults the objector by converting him into a licensed law-breaker, a position of odium to which no self-respecting citizen can willingly submit. If, on the other hand, compulsion is a wrong thing, as the anti-vaccinists contend, the law should be entirely repealed, and all extra-legal methods of compulsion, whether by Government Departments or private employers, should be made illegal. It is a scandal that men should be compelled to sell their bodies along with their labour.

In 1857, Sir John Simon said that against "the vast gain" by (arm-to-arm) vaccination "there is no loss to count." In opposition to this "terminological inexactitude" it may be truly said that against the vast gain to be obtained by the disestablishment and disendowment of the practice of vaccination, there will be only one loss to count. The nation will gain in health, parents will gain in liberty, the long roll of heroic anti-vaccinist martyrs will gain in honour, the law and its administrators will gain in respect, the ratepayers will gain in pocket, and even the doctors will secure a gain in scientific freedom and in public esteem which will, in the long run, more than compensate them for their immediate loss of fees.

In these vast gains lie the justification of the anti-vaccinist contention that **"the abolition of all laws enforcing or encouraging vaccination is of more immediate and vital importance than any party dogma or any political programme."** (Alfred Russel Wallace.)

APPENDIX.

DIAGRAM A—ILLUSTRATING THE EFFECT OF THE ABANDONMENT OF INOCULATION IN CAUSING A RAPID DECLINE OF SMALLPOX IN ENGLAND AND WALES, SCOTLAND AND IRELAND, AFTER THE YEAR 1840.

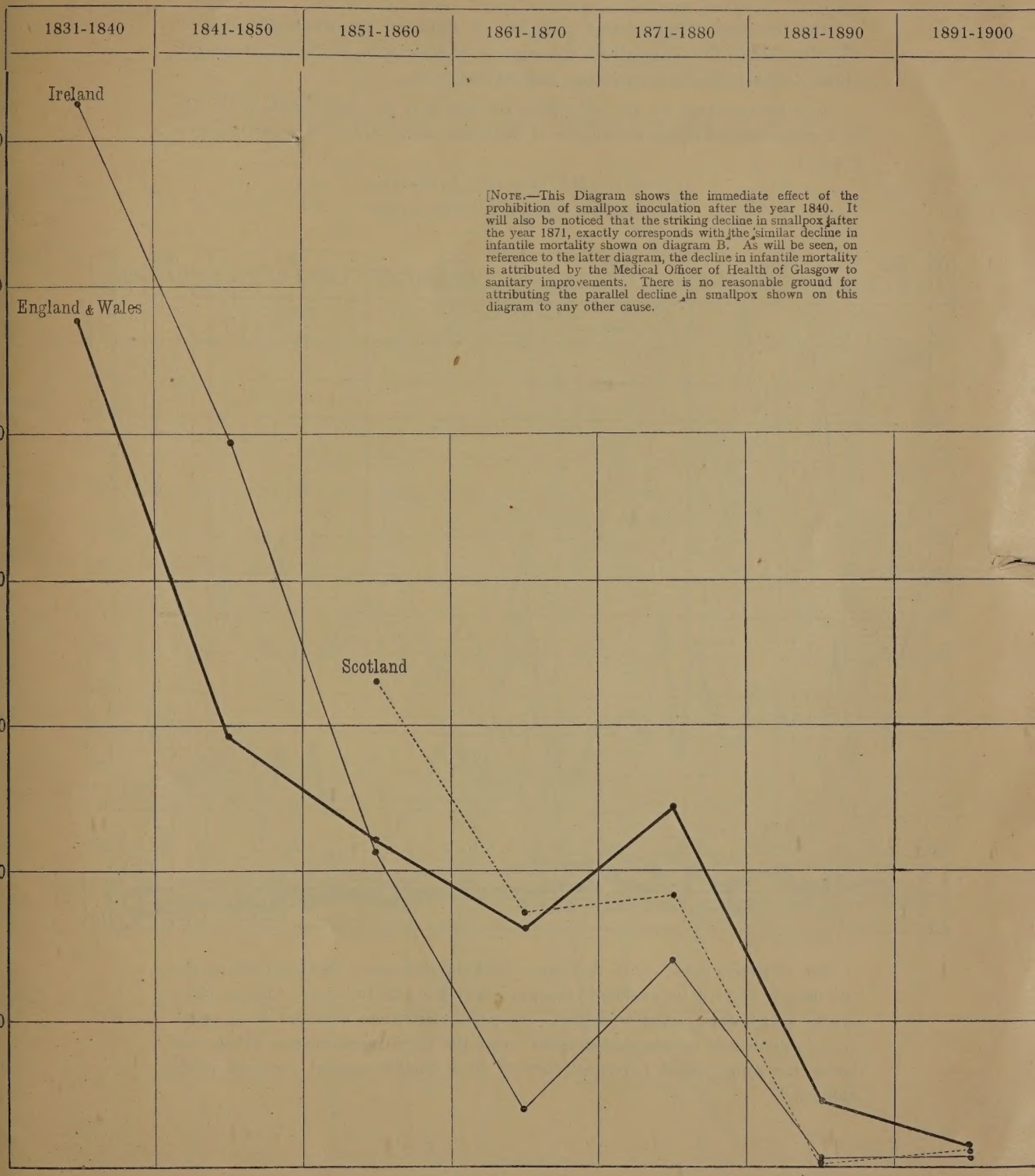
DIAGRAM B—ILLUSTRATING THE EFFECT OF MODERN SANITARY IMPROVEMENTS IN REDUCING INFANTILE MORTALITY.

DIAGRAM C—SHOWING THAT IN ENGLAND AND WALES THE YEARS OF MUCH SMALLPOX WERE YEARS OF MUCH VACCINATION, AND THE RECENT YEARS OF DECLINING VACCINATION WERE YEARS OF DECLINING SMALLPOX.

DIAGRAM D—ILLUSTRATING DR. FARR'S TABLE AS TO THE GREATER INCIDENCE OF SMALLPOX AND OTHER FEVERS IN THE CASE OF LIVERPOOL, AS COMPARED WITH ENGLAND AND HEALTHY DISTRICTS.

DIAGRAM A. *(See pp. 5 and 6.)*

SHOWING THE SMALLPOX DEATH-RATES PER MILLION OF POPULATION IN ENGLAND AND WALES SCOTLAND AND IRELAND, IN DECENNIAL PERIODS.



[NOTE.—This Diagram shows the immediate effect of the prohibition of smallpox inoculation after the year 1840. It will also be noticed that the striking decline in smallpox after the year 1871, exactly corresponds with the similar decline in infantile mortality shown on diagram B. As will be seen, on reference to the latter diagram, the decline in infantile mortality is attributed by the Medical Officer of Health of Glasgow to sanitary improvements. There is no reasonable ground for attributing the parallel decline in smallpox shown on this diagram to any other cause.

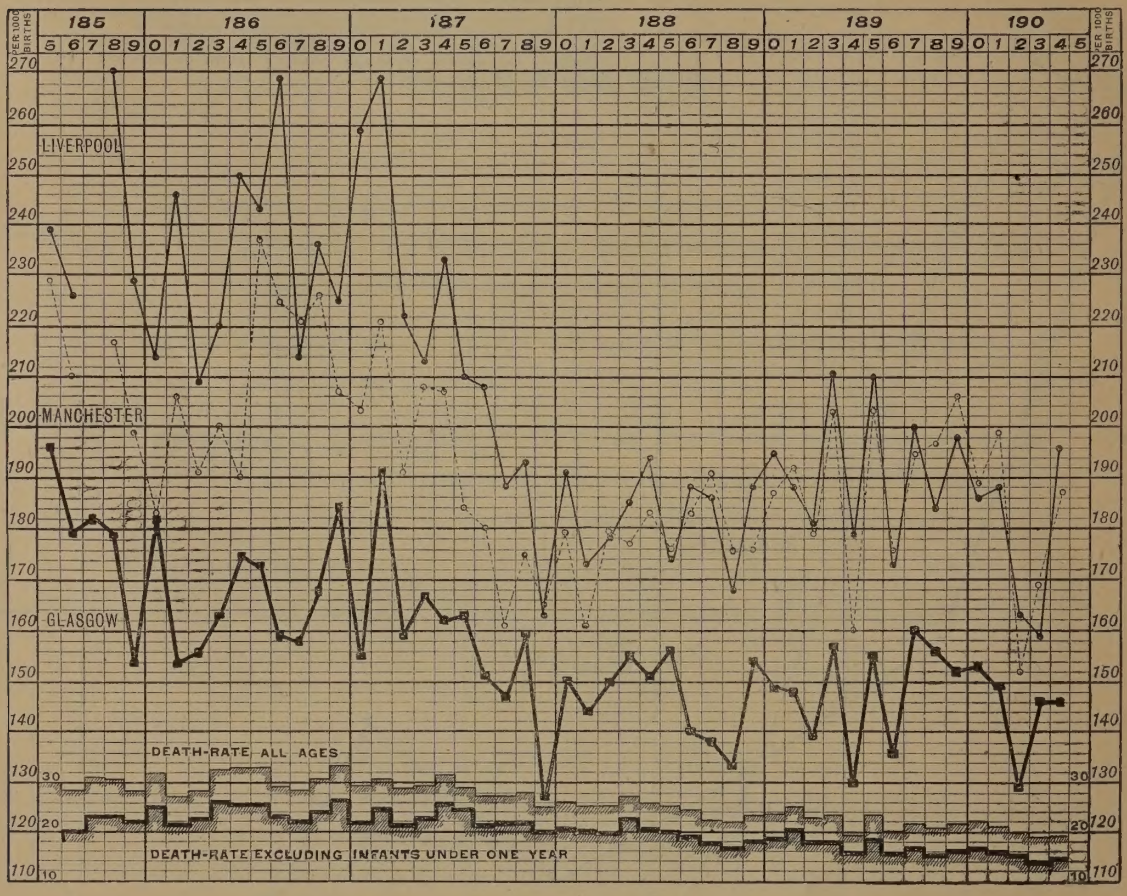
DIAGRAM B. *(See pp. 6 and 7.)*

The following Diagram was prepared, in 1905, by Dr. Chalmers, Medical Officer of Health for Glasgow, for the purpose of illustrating the effect of modern sanitary improvements in reducing infantile mortality.

It is inserted here for the purpose of proving that the same causes have also been adequate to produce the decline of smallpox, since 1871, shown on Diagrams A and C.

GLASGOW, MANCHESTER, LIVERPOOL.

INFANTILE MORTALITY 1855—1905.



Dr. Chalmers says :—" In this chart a definite decrease is indicated during the '70's decade, and it is impossible to dissociate therefrom the influence of the sanitary reforms which this period witnessed. In particular, there occurred in Glasgow during this decade extensive clearances under the City Improvements Trust, and during the same period Liverpool entered on a crusade against common privy middens."

DIAGRAM C. (See p. 8.)

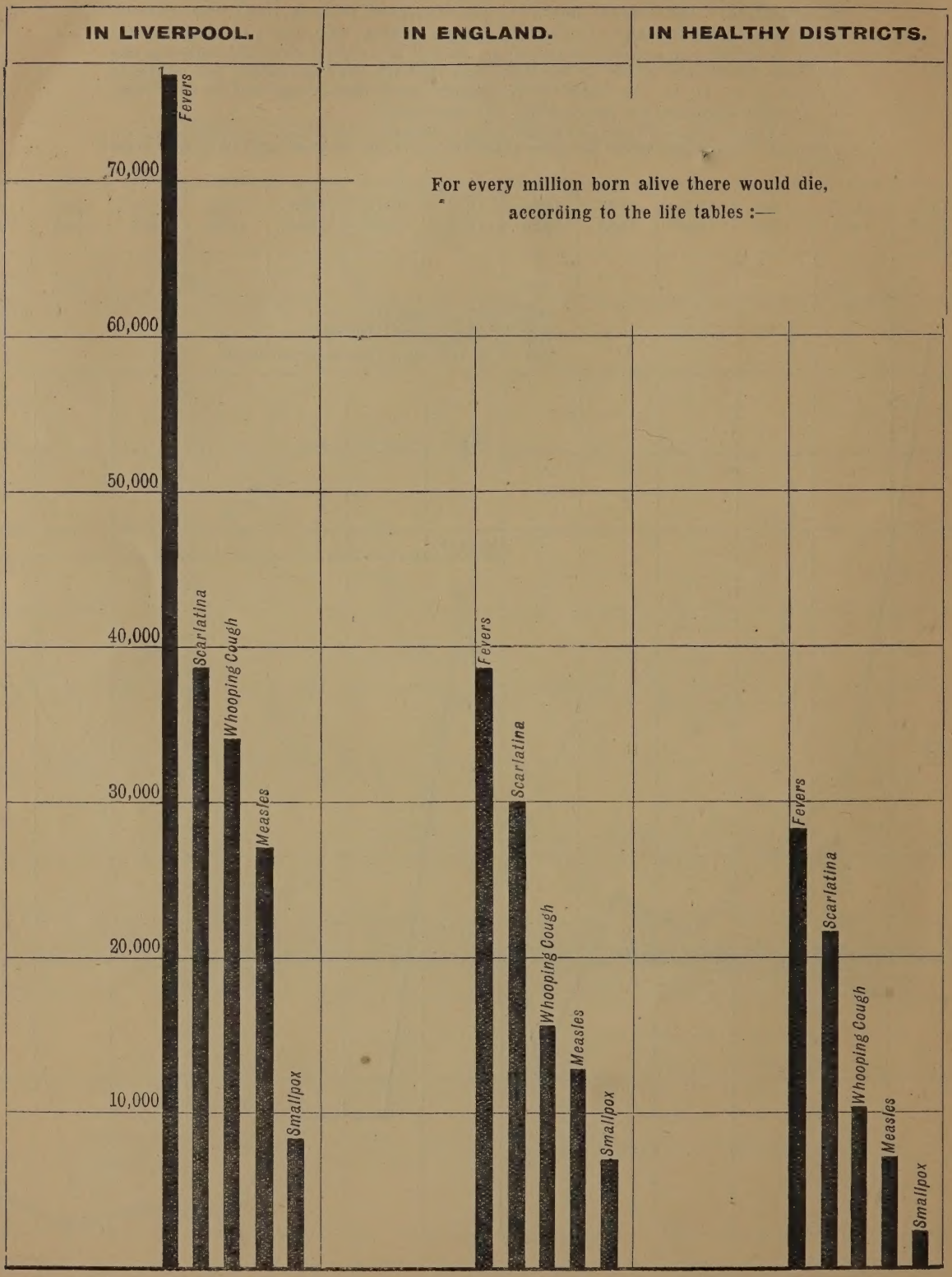
VACCINATION AND SMALLPOX IN ENGLAND AND WALES.

The heavy line shows the annual average death-rate from Smallpox per million of population. The line (*a*) shows the per centage of primary *public* vaccinations at all ages to births; and the line (*b*) the per centage of infants to births vaccinated by *public* and *private* vaccinators. It will be noticed that the scale for the smallpox death-rate fs 100 to the inch, and that for the vaccination per centages (*a*) and (*b*) is 10 to the inch. The figures have been displayed in this way, on a single diagram, for convenience of comparison.

NOTE.—The public vaccination figures prior to 1871 include re-vaccinations, but as public re-vaccinations were not legal until the passing of the 1867 Act the number would be so small as not to seriously affect the accuracy of the diagram.]

DIAGRAM D. *(See p. 18.)*

Illustrating Dr. Farr's Table as to the greater incidence of Fevers in the City of Liverpool as compared with England and Healthy Districts.



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PUBLICATIONS.

The following publications may be obtained at the National Anti-Vaccination League Offices at the prices named, post free:—

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Pickering's "Vaccination or Sanitation? Which?" .. .. 7s. 6d.
The Minority Report of the Royal Commission on Vaccination.. 6d.
Vaccination a Delusion. (Dr. Alfred Russel Wallace) .. .. 11d.
Vaccination and the State: an Address by A. Lupton, M.P., to the Political and Economic Circle of the National Liberal Club, and Speech of Dr. Creighton .. .. 2d.
Exit Dr. Jenner. (Dr. Creighton) .. .. 1d.
A French Medical Debate on Vaccination (Translated) .. .. 2d.
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OBJECTS.

THE OBJECTS for which the League is established are :—The entire repeal of the Vaccination Acts ; the disestablishment and disendowment of the practice of vaccination ; and the abolition of all regulations in regard to vaccination as conditions of employment in the Army, Navy, and in all State departments, or of admission to Educational or other Institutions.

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